

Before the  
Federal Communications Commission  
Washington, D.C. 20554

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Federal Communications Commission  
Office of the Secretary

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In the Matter of

Advanced Television Systems  
and Their Impact on the Existing  
Television Broadcast Service

Review of Technical and  
Operational Requirements  
Part 73-E, Television Broadcast  
Stations

Reevaluation of the UHF Television  
Channel and Distance Separation  
Requirements of Part 73 of the  
Commission's Rules

MM Docket No. 87-268

REPLY COMMENTS OF THE  
NYNEX CORPORATION

I. INTRODUCTION

The NYNEX Corporation (NYNEX) provides these replies in response to comments filed in the above-referenced proceeding.<sup>1</sup> NYNEX commends the Commission for its efforts to develop a regulatory and technical framework that promotes the expeditious deployment of Advanced Television Services

<sup>1</sup> In the Matter of Advanced Television Systems and Their Impact on Existing Television Broadcast Service; Review of Technical and Operation Requirements: Part 73-E, Television Broadcast Stations; Reevaluation of the UHF Television Channel and Distance Separation Requirements of Part 73 of the Commission's Rules, MM Docket No. 87-268, Tentative Decision and Further Notice of Inquiry, FCC 88-288, released September 1, 1988 ("Tentative Decision and Further Notice").

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(ATV) in the United States.<sup>2</sup> The record compiled in this proceeding overwhelmingly supports the Commission's investigation of the policy and technical issues concerning ATV. NYNEX has been actively involved in the important work of the FCC's Advisory Committee on ATV and we hope to continue to contribute to this process.

For the most part, NYNEX agrees with the conclusions reached by the Commission in its Tentative Decision and Interim Report<sup>3</sup> and the comments filed in support of those conclusions.<sup>4</sup> However, we also agree with commenters who urge the FCC to proceed cautiously to analyze these complex issues and to ensure that no unnecessary regulatory actions reduce the diversity of existing services, impede the

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2 In these comments, NYNEX uses the term ATV consistent with the FCC's definition of that term. That is, as used herein, the term "ATV" refers to "any system that results in improved television audio and video quality, whether the methods employed improve the existing NTSC transmission system or constitute an entirely new system." Tentative Decision and Further Notice at 4. The FCC distinguishes ATV from "high definition television" ("HDTV"), a term the Commission uses to describe a transmission system that approximates the image quality of 35mm film. Id. See also, comments filed by Radio Telecom and Technology.

3 Interim Report of the FCC Advisory Committee on Advanced Television Service, released June 16, 1988 ("Interim Report").

4 The Commission has tentatively concluded that ATV should be brought to the public using existing television broadcast spectrum allocations, that deployment of ATV should not be permitted to displace substantial investment in existing National Television System Committee (NTSC) delivery systems, and that additional information must be obtained concerning emerging ATV technologies.

deployment of ATV in this country or reduce the benefits of other innovative non-terrestrial broadcast technologies.<sup>5</sup>

II. ATV NON-TERRESTRIAL BROADCAST TRANSMISSION  
STANDARDS SHOULD BE SET BY INDUSTRY

The comments filed in this proceeding demonstrate the complexity of the issues involved in determining the appropriate manner in which ATV should be broadcast non-terrestrially. Notwithstanding the complexity of these issues, however, NYNEX agrees with the Commission's decision to limit its application of mandatory standards to terrestrial transmission media used to distribute ATV signals.<sup>6</sup> The FCC should not establish standards in instances when non-terrestrial broadcast transmission media are used to distribute ATV signals. Instead, standards for transmission media, other than terrestrial broadcast, should be developed by industry participants. Industry standards bodies could provide the appropriate forums for setting the standards for non-terrestrial broadcast ATV. These groups strive to effectively promote the development of technology and industry standards in a manner that meets customer demand without inhibiting the transmission of high quality signals over other media. Industry standards for the individual transmission systems (e.g., CATV, satellite, private microwave and fiber-based networks) which will be necessary for ATV

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<sup>5</sup> See, e.g., comments filed by Ameritech. See also, Fiber Optics Division of the TIA at 2-4.

<sup>6</sup> Other commenters agree with this view. See, e.g., comments filed by SBICA, NCTA, SWB, GTE and IEEE.

implementation should be permitted to develop as customer demand warrants. The Commission should allow these bodies to act, and only step in where the industry is unable to reach consensus.

We also note that an open interface architecture approach, such as that proposed in the Commission's Tentative Decision and Further Notice, would permit other media to develop separately from the terrestrial broadcast delivery systems and would facilitate the development of technically sophisticated ATV systems that may require greater bandwidths or signalling formats that differ from those capable of being transmitted by terrestrial broadcast.

Benefits of non-terrestrial broadcast media such as fiber optic cable are substantial and include superior picture and audio quality and maximum channel density. Moreover, non-terrestrial technologies avoid the need to utilize additional spectrum. Unlike the terrestrial medium, which is substantially limited by spectrum availability, other media offer consumers the option of receiving ATV signals which provide the maximum potential of the technology deployed. Another benefit is the potential for delivering services, including high quality video conferencing, medical imaging, advertising, CAD/CAM (computer-aided design and manufacturing) and computer modeling.

III. AN OPEN INTERFACE ARCHITECTURE MODEL WILL  
FACILITATE SUCCESSFUL IMPLEMENTATION OF ATV IN  
THE UNITED STATES

As we noted above, NYNEX believes that the open interface architecture model proposed by the Commission is

appropriate. Satisfying consumer preferences is essential to the successful implementation of ATV in the United States. Therefore, the interface standard should accommodate the terrestrial broadcast requirements set by the Commission. However the technical details of other non-terrestrial broadcast media should be standardized by industry participants. In this way, technological advances that improve the availability of delivery systems of differing quality (e.g., digital video) will not be artificially limited to conform with existing services.

We also concur with the FCC and commenters who state that ATV delivery media should be compatible with the existing base of customer-owned NTSC receivers.<sup>7</sup> In its comments, GTE notes that "[a]s ATV sets become available, each U.S. home is likely to have multiple NTSC-compatible sets of different levels of quality. It is unlikely that a consumer will change out all of his or her sets to ATV at one time."<sup>8</sup> We agree. Signal reception must occur without any perceptible loss in quality in existing NTSC broadcast signals. In this manner, the industry can promote the development of ATV without disenfranchising the United States' viewers who currently receive television programming via some 160 million NTSC receivers.<sup>9</sup>

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<sup>7</sup> Further Notice at ¶ 123-5.

<sup>8</sup> GTE at 8-9. See also, Nathan Associates at 1-6.

<sup>9</sup> See also, GTE at 9.

While we agree that the public interest would be served by ATV delivery media that are compatible with the existing base of customer-owned NTSC receivers, we agree with commenters who caution the FCC not to require compatibility among the various ATV delivery media.<sup>10</sup> Instead of requiring compatibility among various media, the FCC should promote the development of an open interface architecture that permits multi-port connectors to be used to interconnect various transmission media with display units. Demodulation and decoder equipment used to terminate the various media that transport ATV signals should be capable of handling the media chosen by the end user. This approach would permit consumers to receive the highest possible quality signal offered by the transmission media of their choice. But, at the same time, this approach leaves individual delivery systems unaffected by limitations that may affect other delivery systems.<sup>11</sup> The Commission should allow marketplace forces to ensure that equipment used in conjunction with ATV is capable of interconnection with the delivery media desired by the end user. As noted previously, requiring compatibility among

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10 Moreover, we agree with commenters that question whether the Commission has legal authority to promulgate standards that affect devices, such as video cassette recorders, that do not fall within the definition of telecommunications equipment. See, Ameritech at 2-3; see also, Tentative Decision and Further Notice at ¶ 130. We agree with Ameritech that issues concerning terrestrial broadcast media "should not cause the Commission to attempt to define a video display standard that is constrained by the limitations of the broadcast medium." (Ameritech at 2.)

11 See also, comments filed by Schreiber at 29.

alternate delivery systems may act to constrain one technology to the actual limitations of another.

IV. THE COMMISSION MUST STRIVE TO DETERMINE THE  
APPROPRIATE BALANCE BETWEEN ATV DELIVERY SYSTEMS  
AND THE EXPANDING NEED FOR WIRELESS INDUSTRIES

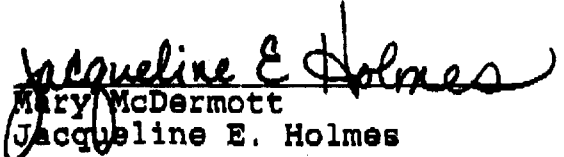
NYNEX fully supports the FCC's desire to resolve issues related to spectrum allocation as rapidly as possible.<sup>12</sup> Moreover, we agree that the Commission's tentative decision to maintain existing spectrum allocations for ATV terrestrial broadcast may be appropriate and we support the Commission's tentative decision with respect to spectrum utilization for ATV terrestrial broadcast to operate within the existing 6 MHz range at least until a final decision is made. We note, however, the record contains a wide range of views on this issue. For instance, some commenters, such as the Corporation for Public Broadcasting (CPB), point to the need to focus concern on the "serious constraints that spectrum scarcity places on realistic design of ATV systems for terrestrial broadcast transmission." We agree and note, for example, that additional spectrum is also required by an expanding need for wireless services.

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<sup>12</sup> Tentative Decision and Further Notice at ¶ 94.

NYNEX urges the Commission to achieve an appropriate balance between these competing spectrum requirements.

Respectfully submitted,

  
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Dated: January 23, 1989



CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing REPLY  
COMMENTS OF THE NYNEX TELEPHONE COMPANIES was served by first  
class United States mail, postage prepaid, on the parties  
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